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ABSTRACT

The instructional manual is designed to accompany the Speech Indicator, a small, portable, economical ($15) device for deaf persons for telephone communication (available from Leadership Training Program in the Area of the Deaf, San Fernando State College). The device indicates when the other party speaks, not what he says. A topic outline and sequence of instructional procedures are suggested. Material for practice with the Speech Indicator is drawn from actual problems encountered in use of the device by previous instructors and students. Standard operating procedures are explained, as are special procedures (use of pay phone, calls through a switchboard, emergency calls). Also described are special systems for communication (number, dial code, and alphabet division systems, Morse code, common amateur abbreviations, phonetic code) and examples of Speech Indicator applications. (KW)

TELEPHONE COMMUNICATION FOR THE DEAF

SPEECH INDICATOR MANUAL

LEADERSHIP TRAINING PROGRAM IN THE AREA OF THE DEAF • SAN FERNANDO VALLEY STATE COLLEGE

FOREWORD

This instructional manual is designed to accompany the Speech Indicator, a device developed by Hugh L. Moore, Electronics Education Specialist for the Los Angeles City Schools, Los Angeles, California.

The concept of telephone communication for the deaf was originated by Dr. Ray L. Jones, Project Director of the Leadership Training Program in the Area of the Deaf at San Fernando Valley State College, Northridge, California. The present Speech Indicator is the latest result of the pioneering efforts of Mr. Moore and Dr. Jones to provide a device for deaf persons for telephone communication which will be economical and convenient.

This manual presents a suggested topic outline and sequence of instructional procedures. Since these are basic procedures, persons using this manual are invited to modify the suggestions in any way necessary to meet varied situations or operating conditions. An attempt has been made to present practice material drawn from actual problems encountered by previous instructors and students.

Your responses concerning the suggested procedures are welcomed as well as reports of other innovative techniques or ideas which might be of interest to other users of the Speech Indicator.

PREFACE

It is ironical that the telephone, which was invented by Alexander Graham Bell to aid his hearing-impaired wife, has today become an enemy of deaf persons throughout the world.

To the deaf person, the telephone is a constant reminder of his handicap and of his dependence on others for its use. It also stands as an invincible barrier to his vocational advancement, for he has found from sad experience that in employment he is considered for promotion only to positions which do not require the use of the telephone. Although the deaf person has learned to "get along" without the aid of the telephone in his everyday living, it still stands as a psychological "enemy" to the realization of his full potential.

These projects have included a pilot installation of "telephone-writing" equipment in a network of five stations in the greater Los Angeles area. The network was utilized by deaf persons at two of the larger clubs for the deaf and by deaf teenagers writing to hearing friends. The newly developed "picture-phone" from Bell Telephone Laboratories was also evaluated. Both telephone-writing and picture-phone equipment offer very satisfactory communication media for deaf persons, but for the present, the cost makes their use prohibitive.

Other studies have explored the area of "tactile communication" as currently being developed for the Air Force, various signaling systems which can be utilized over telephone lines including "visible speech", and various code equipment involving light, meter, and touch mechanisms. From these studies it was determined that a device was needed which would (a) provide a deaf person with a visual signal by which he can identify the various telephone signals and code replies; (b) be relatively inexpensive; and (c) be readily portable and usable on any standard telephone instrument.

Mr. Hugh Moore, electronics specialist for the Los Angeles City Schools, developed a device called a "Speech Indicator" which appears to meet the above criteria. Demonstration models were first constructed and

field tested in the fall of 1964. Their enthusiastic response led to the construction of additional devices and the establishment of a formal adult education course in "Telephone Communication for Deaf Persons".

In this course deaf persons and their hearing partners received instruction in the simple mechanics of telephone operation, and were introduced to the "Speech Indicator". In the laboratory setting, they made practice calls across the room to their hearing partners, to other hearing persons in the room, and finally to friends and total strangers in the community.

Grateful acknowledgement is extended to the following personnel for services which made this exciting program possible: Nanette Faint, Teaching Aids Consultant, and Jed Crane, General Marketing Personnel Supervisor, Pacific Telephone Company; J. Richard Smith, Assistant Superintendent, and Virginia Vail, Principal of Reseda Adult School, Division of Adult Education, Los Angeles City Schools; Harold Ramger, President, and Barbara Babbini and Lillian Skinner of the California Association of the Deaf; and Robert G. Sanderson, President of the National Association of the Deaf.

Mr. Hugh L. Moore, Electronics Specialist, Los Angeles City Schools, is to be commended, not only for the development of the "Speech Indicator", but for his leadership in establishing the "Telephone Communication" class and for the development of this formal course of study.

In 1966, a tactile "speech indicator" was developed for use by persons who are both deaf and blind. This device is currently being field tested by the American Foundation for the Blind under the direction of Miss Annette Dinsmore.

It is hoped that this material will encourage those who are vitally concerned for the welfare of the deaf in other parts of the United States to establish classes in which the potential of telephone communication for deaf persons can be demonstrated.

RAY L. JONES
Project Director
Leadership Training in the
Area of the Deaf

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SECTION I

INTRODUCTION

Preparation for Instruction

Persons planning to use the Speech Indicator for telephone communication should make some necessary preparations before the first training session.

These preparations include:

1. Provision of a Speech Indicator for each deaf person in training.

2. Planning to have someone--friend or relative--accompany the deaf person to each session to work with him during training.

3. Planning to have someone--friend or relative--at a local phone to receive a phone call during the first training session. This individual will receive the first outside telephone call placed by the deaf person.

4. Copies of all practice materials included in the appendix of this manual.

Laboratory or Classroom Setting

In order to provide a suitable teaching environment for groups, there should be a telephone position for each deaf person as well as another dialing position in the same room where the helper will work. These telephones, which should be individual dialing positions rather than extension units, must be equipped to produce (1) dial tones, (2) ring signals, (3) busy signals, and (4) voice communications.

Deaf students should also be able to make dial calls into the local community from these installations. In addition, there should be availability to a pay phone for the training and experience necessary to learn the correct operation of this instrument.

Since the practice sessions are long, and there is need for several sheets of material and note-paper in addition to the telephone, tables and chairs have been found to provide a comfortable and manageable setting. It is advisable to have some sound absorbing divider between phone stations

because voice volume frequently interfers with the Speech Indicator responses if the stations are positioned too closely.

If dividers are not readily available, persons may be asked to lower voice tones to avoid interrupting those persons nearby.

Relays can be attached to telephones by the phone company to flash a light indicating an incoming call for deaf persons. Although this is a helpful device for demonstration purposes, it is not absolutely necessary for training in the use of the Speech Indicator.

In the laboratory-classroom at San Fernando Valley State College, telephone jacks were installed on opposite sides of a classroom and extension phones were plugged in as needed during training sessions. This allowed the convenience and security of storing the phones when they were not in use, as well as the possibility of using them in other installations as the need was presented.

* * * * * *

Up to this point, all of our attention has been directed toward preparation for training in the use of the Speech Indicator for telephone communication. If proper planning and preparation have been completed, you should now be ready to begin instruction.

SECTION II

STANDARD OPERATING PROCEDURE

Basic Telephone and Speech Indicator Operation

The standard telephone is an electronic device for voice communication. Although it is a complicated electronic device from a technical viewpoint, it is a simple device for the average person to operate, after certain basic signals and operations are learned.

The basic signals are:

Telephone Signal	Indication on Speech Indicator
(A) Dial tone	A steady signal
(B) Ring signal	A slow rhythmic signal
(C) Busy signal	A fast rhythmic signal
(D) Voice communication	Irregular signals

The Speech Indicator is designed to work on all makes of telephones. With experience, you will find that the pick-up unit can be placed in several locations on a Bell Telephone instrument and the meter will indicate maximum.

On telephones that are manufactured by other companies, you may find that the signal is very weak and the pick-up must be placed in a particular location in order to get full scale reading on the meter. In order to find the best location for the pick-up, the handset is removed from the telephone cradle so that the dial tone will appear. With the volume turned to maximum, the pick-up is moved around the edge of the earpiece until maximum deflection is indicated. This point will vary from one unit to another, depending on how the earphone element is located inside the handset.

Also, the pick-up can be attached to the base of the telephone. With the volume turned to maximum, move the pick-up around the base until maximum deflection is indicated.

Regardless of method selected, be sure to locate the position showing optimum deflection on the meter before using the telephone.

The standard procedure would be to (1) lift the telephone receiver to your mouth and ear, (2) check for a dial tone to see that lines are clear for your call, (3) dial the number you are calling, (4) check the ring signal to see that the phone is operating, (5) maintain voice communication with party when the phone is answered.

If the phone you are calling from is a party-line (more than one phone on a single line) and one of the other parties is using the phone, you will notice voice communication as soon as you lift the receiver. If this occurs, hang up and try again.

If the phone at the number you are calling is in use, after dialing you will notice a busy signal rather than a ring signal. If this occurs, wait a few minutes and try the call again.

You should now be able to recognize the basic signals necessary to know the operational condition of the telephone.

Speech Indicator Operation

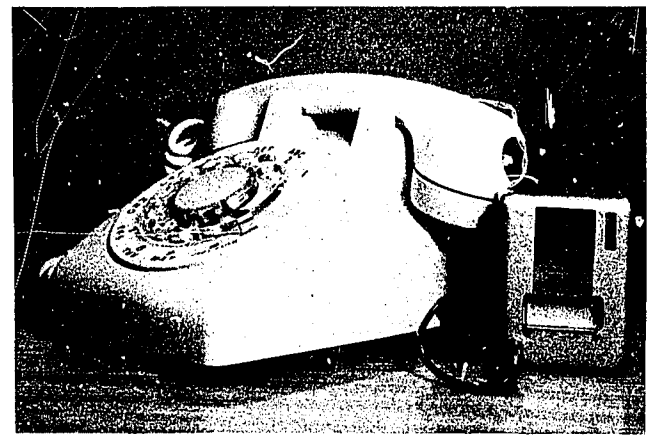
The Speech Indicator is equipped with a combination on-off and volume switch. When the unit is turned to the "off" position there is no drain on the batteries. Also, when the cable connector is taken out of the unit, the battery is automatically disconnected. This offers double assurance that the battery is not connected while the Speech Indicator is not in use.

To use the Speech Indicator, the cable connector must be plugged into the Speech Indicator unit and the on-off volume control turned "on" to a volume high enough to give proper needle deflection.

A typical installation is shown in Figure A.

FIGURE A

Typical installation showing magnetic pick-up in position on telephone receiver and connected to the speech indicator



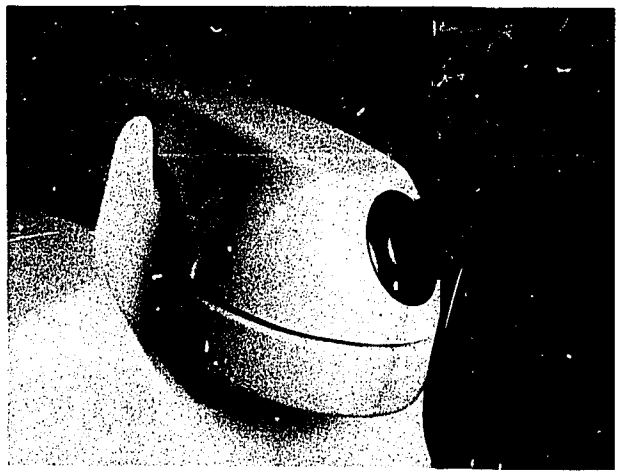


FIGURE B

Magnetic pick-up attached to telephone receiver with suction cup

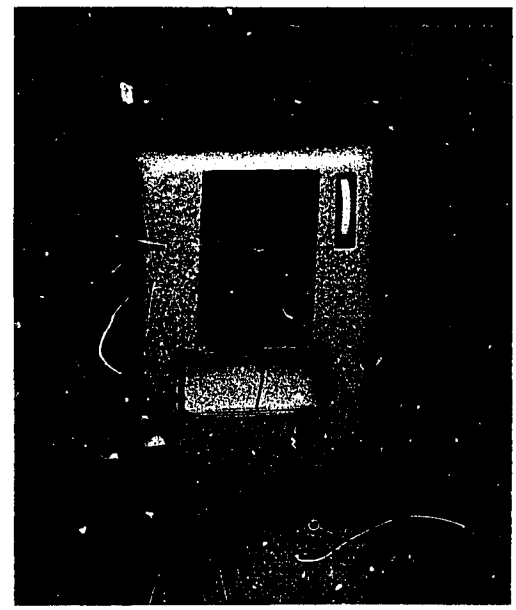


FIGURE C

Speech Indicator with meter needle registering dial tone. Note volume control in upper right corner; magnetic pick-up plug in lower left corner of Speech Indicator

Some deaf persons have found it more convenient to attach the Speech Indicator pick-up to the base of the telephone. If this procedure is used, care should be taken to find the correct placement for optimum results; placement varies from one telephone to another.

You may test the Speech Indicator for use by a simple three step procedure:

1. Connect the Speech Indicator to a telephone.
2. Turn the on-off volume switch to "on".
3. A dial tone should be indicated.

If no deflection is noted, check:

1. The position of the on-off volume control.
2. The installation of Speech Indicator on telephone, particularly the position of the magnetic pick-up. (See Basic Operation)
3. The telephone for indications of damage or other problems putting the set out of order.
4. Condition of batteries in the Speech Indicator.

The basic responses you will use are:

1. "No" for a negative response.
2. "Yes-Yes" for an affirmative response, and
3. "Please Re-peat" to indicate that the message should be repeated.

The Speech Indicator will give the deaf person a visual cue by means of a needle being deflected across a small dial on the front of the Indicator. The deflections will be indicated as follows:

	Response	Signal
1.	"No" (one syllable)	Needle deflects once
2.	"Yes-Yes" (two syllables)	Needle deflects twice
3.	"Please Re-peat" (three syllables)	Needle deflects three times

You should now be able to recognize the basic responses indicated to you from a telephone equipped with a Speech Indicator.

Standard Introduction

You are now equipped with the skill and knowledge necessary to use the telephone for communication. In order to develop skill and poise in the use of the telephone, you should practice calling your training-partner, possibly using the standard introduction:

When placing a phone call, you should be prepared to say the following statements when the phone is answered:

1. My name is _____.
2. I am a deaf person and cannot hear what you say.
3. I have a device that will indicate to me when you say "No", "Yes-Yes" and "Please Re-peat".
4. I will ask you questions, and would like you to respond with "No", "Yes-Yes" and "Please-Re-peat".
5. Do you understand?
6. Is this (Number you are trying to reach) ?
7. Is this (Person you are trying to reach) ?
8. Various questions which will elicit the standard responses from the person called.
9. "It has been nice talking to you."
10. "Thank you, and good-bye."

When you have mastered the techniques of placing the call, communicating your message, and receiving the desired responses you are ready for your first outside telephone call.

Suggestions for Using the Telephone and Speech Indicator

Plan ahead - Organize your message before placing the call. Don't hesitate to take notes, or indicate responses to prepared questions.

Don't hesitate to repeat - Some hearing people do not "catch on" very fast. Don't hesitate to repeat your message, or suggest that the hearing person merely say "No", "Yes-Yes" or "Please Re-peat". Use humor to calm the hearing person down; your call may surprise him more than you realize!

The talkative type - If a hearing person continues to talk in long

series of words or sentences, rather than the suggested responses, humor him with some statement like, "You know I cannot hear a sound, and this dumb little device cannot talk, so you will have to just say, "No, "Yes-Yes, or "Please Re-peat".

Conversation block - Sometime you may encounter a conversation block. Don't let confusion panic you. Keep calm, cool, and think out loud. Example:

Is this (349-1212)?	"Yes-Yes"
Is this the Harris residence?	"Yes-Yes"
Is this Mr. Harris?	"No"
Is Mr. Harris home?	"No"
Is this a member of the Harris family?	"Yes-Yes"
Can you take a message for Mr. Harris?	"Yes-Yes"

etc.

If at first you don't succeed, try again - Occasionally, you will encounter someone who just will not (or cannot) cooperate. If someone just cannot understand you, or the technique of using the Speech Indicator, ask to speak to someone else. If the telephone operator appears to be uncooperative, thank her and hang up. Dial again and you will probably get a different operator.

Short sentences - If you structure your communication into a series of short sentences, the hearing person has more of an opportunity to participate in the call.

Do you think we should go?	"Yes-Yes"
Will we have time?	"Yes-Yes"
Can we be back before dark?	"No"
Does that matter to you?	"No"

etc.

At the completion of Section II, you should be able to connect your Speech Indicator to a standard telephone, determine that it is ready for

you to use, place your call, communicate your message, gather the desired responses, and bid your party good-bye.

You will find work sheets in the appendix for practice outside phone calls. Keep a record of your individual practice sessions, and note any problems encountered. Don't be afraid to ask for assistance.

SECTION III

TELEPHONE USE INVOLVING SPECIALIZED CONDITIONS

Use of Pay Telephones

Calls placed through pay phones may introduce some new problems which require additional skill in solving.

You should learn the general operation of pay phones.

(A) Pay phone - general instructions

1. The dial tone will not register until ten cents is deposited. This is true of both local calls and toll calls. Carefully read the instructions on the face of the telephone. Pay phone procedures differ from one area to another.
2. Check the printed list of prefixes attached to all pay phones. If the number you wish to call is not listed, it is a toll call and you must dial the operator. If you need assistance, most operators have been instructed by the telephone company to dial the number for a handicapped person or in an emergency.
3. In the event you are making a toll call from a pay phone and are working through the operator, your ten cents will be returned to the coin return slot immediately after the operator answers. Develop a habit of checking this coin slot after you complete your call.

You should develop and practice the skill of placing local calls through the operator using a pay phone, and placing long-distance or toll calls through the operator using the pay phone.

You should also be able to determine exact charges for long-distance and overtime calls from the responses given by the operator.

(B) Procedure for local (pay phone) calls:

1. Attach Speech Indicator
2. Lift handset from hook
3. Deposit ten cents
4. Check for dial tone
5. Dial your number
6. Check ringing
7. When party answers, give the Standard Introduction

8. If you dial outside the zone for ten-cent calls, the operator will come on the line. Check to see if you have the operator. If the operator comes on, use the Standard Introduction and procedure for pay phone toll calls.

(C) Procedure for toll (pay phone) calls:

1. Attach Speech Indicator
2. Lift handset from hook
3. Deposit 10 cents in slot (two nickels or one dime)
4. Check for dial tone.
5. Dial operator
6. When operator answers, you say:

   My name is _____.

   I am a deaf person and cannot hear what you say.

   I have a device that will indicate to me when you say "No", "Yes-Yes", or "Please Re-peat".

   Do you understand?

   Is this the operator?

7. The number at this phone booth is _____.
8. Would you please dial (Number you are calling) for me? Do you understand?
9. Will the charges be ten cents? Fifteen cents? Twenty cents?
   a. Continue raising the price until you get a "Yes-Yes" response. If the price is going too high, you should ask the operator, "Will the charges be more than 50 cents?" This will straighten things out if the operator made a wrong answer somewhere in the beginning.
10. At about this time, the dime you originally placed in the pay phone will be returned in the coin slot.
11. Ask the operator to blow four times into the mouthpiece when your party answers the ring.
12. Deposit money in coin slot.
13. When your party answers, use the Standard Introduction, and check to see if you have the right number or party.
14. Try to limit your call to 3 minutes.
    a. If your call exceeds 3 minutes, there will be an additional charge.
    b. If you want the operator to notify you when your 3 minutes are up, ask her to blow 4 times into her microphone.

c. The operator will allow you to pay for the additional time after you have finished talking.

15. Hang up phone, and wait a few moments, placing your hand on the wall unit to see when phone rings.

16. If the phone rings, check to see if it is the operator. If it is, determine additional charges and deposit money.

Calls Through a Switchboard (PBX)

Calls placed through a PBX switchboard are probably the most complicated and consufing for a deaf person. You must be able to visualize what is occurring throughout the system, and realize that possibly more than one operator is involved and maybe even more than one secretary in addition to operators.

Calls placed through such a system require patience and understanding on the part of each person involved.

As you succeed in reaching each new person in the sequence, use the Standard Introduction to identify yourself, explain the responses you can receive, identify the party to whom you are speaking, and communicate your message.

PBX Procedure - general:

1. Standard Introduction
2. Is this (Number you are calling) ?
3. Is this the PBX operator?
4. I would like to speak to (Person you are calling) .
5. (Give extension number or department, if known.)
5. Please repeat ring so I can tell you are ringing.
6. Standard Introduction.
7. Is this (Person you are calling) ?
8. If "No", ask "May I speak to (Person you are calling .
9. If he is not available, try to ascertain whether you can call back in a few minutes, later in the day, next week, or leave a message.
10. Be sure to check to see that your message is clearly understood.

Practice the PBX switchboard routine until you can mentally move the action from one person to the next in logical sequence without

confusion or frustration. Practice worksheets can be found in the appendix of this manual.

Emergency Calls

One of the greatest assets in time of an emergency is the telephone. Now the use of a telephone by a deaf person can provide the same sense of security and safety enjoyed by the hearing person.

Many people -- the hearing world included -- become so excited and tense in an emergency that important facts are not communicated.

You should learn the procedure for placing emergency calls of a critical nature through the operator, and less critical calls to neighbors, friends or relatives.

Emergency Call Procedure:

1. Attach Speech Indicator to telephone and check operation.
2. Check dial tone
3. Dial "O" for operator
4. Say "This is an emergency."
5. Say Standard Introduction - "Do you understand?"
6. Describe the emergency.
7. Give telephone number of phone you are using.
8. Give location (address, city) of emergency.
9. Tell what assistance you believe is required.
10. Tell operator where you will be, or who else she might contact.

BE SURE SHE UNDERSTANDS YOUR MESSAGE BEFORE YOU HANG UP THE RECEIVER.

Ask if she needs additional information. If she says "Yes-Yes" check all the information you have given her.

Practice all of the suggested emergency calls listed on the worksheets in the appendix. Develop several others that are appropriate for you and add to your practice sessions.

* * * * * * *

At the completion of Section III you should be able to easily

communicate your messages by phone under normal situations, and in addition, have the skill needed to successfully place toll calls on pay phones, complete calls through PBX switchboards, and have the added security of the telephone skill needed during various kinds of emergency situations.

SECTION IV

SPECIAL SYSTEMS FOR COMMUNICATION

You should now have the skill needed to use the telephone for communicating messages to a hearing person and receiving positive and negative responses from the hearing person via the Speech Indicator.

This section will present various systems by which you can receive not only "Yes-Yes" and "No" responses, but also numbers, words and sentences. The use and complexity of the codes vary, but with practice you will determine the system that is most helpful for you, and thereby increase the value of the telephone for your business and personal use.

Number Systems

Deaf persons can receive numbers over the telephone in one of several ways. One way is for the hearing person to count while the deaf person watches the Speech Indicator and silently counts to himself each time the meter swings. When there are no more meter movements, the last number indicated is the correct one.

A. Example:

1.	Do you have Jane's phone number?	("Yes-Yes")
2.	Write it down.	("Yes-Yes")
3.	Are you ready?	("Yes-Yes")
4.	Would you please count slowly from "one" to the number of the first diget? I will watch my Speech Indicator and silently count along with you. Please start counting now.	
5.	One, two, three, four, five.	("Yes-Yes")
6.	The first number is five.	("Yes-Yes")
7.	Now the second diget.	
8.	One, two, three, four, five.	("Yes-Yes")
9.	The second number is five?	("Yes-Yes")

This procedure is continued until all numbers have been received. Some deaf persons prefer to retain control of the conversation when receiving numbers. They would speak a series of numbers and ask their hearing friend to say "Yes-Yes" when the correct number is reached.

(Example follows)

A. Example:

1.	Do you have Jane's phone number?	("Yes-Yes")
2.	Would you write it down?	("Yes-Yes")
3.	Are you ready?	("Yes-Yes")
4.	I will count from one to zero. When I get to the first number of her phone number, please say "Yes-Yes".	
5.	Do you understand?	("Yes-Yes")
6.	One, two, three,	("Yes-Yes")
7.	The first number is three?	("Yes-Yes")
8.	Now the second number.	
9.	One, two, three, four, five, six,	("Yes-Yes")
10.	The second number is six?	("Yes-Yes")

This procedure is continued until all the numbers are received. Remember that telephone numbers without the area code have seven numbers, and with the area code, they have ten numbers.

One word of explanation is needed at this point. The Speech Indicator needle deflects once for each precise syllable. For instance, the syllable "one" shows one deflection, "two" shows one deflection, "three" shows one deflection, etc.

However, the number seven (7) (the only number containing two syllables when translated into a word) will show two deflections, a large needle movement for the first syllable "sev", and a slight movement for the second syllable "en".

Be sure to consider this fact when receiving numbers, and count only the major needle deflections. Some hearing people, familiar with the Speech Indicator, have developed the habit of blowing into the telephone mouthpiece rather than speaking. This usually insures a precise meter deflection.

Also remember that on the telephone dial, the number after 9 is zero (0), communicated as "ten" (one deflection).

"Dial Code" System

The "dial code" is a system developed in 1966 by deaf persons in the Leadership Training Program, San Fernando Valley State College. This system utilizes the letters of the alphabet which are arranged around the telephone dial on most telephones. (Some newer installations use only

numbers and eliminate the alphabet letters.)

One requirement for the use of this code - as with most codes - is that both persons should be familiar with the code before it can be used. This requires some practice by both the deaf person and the hearing person.

As you look at a telephone, you will note that the alphabet has been divided into nine groups, starting with the second dialing position (2). The letters "Q" and "Z" are left out and these should be assigned to groups 7 and 9 respectively. To use the "dial code", the hearing person must first indicate the group which contains the first letter of the word in his message. He usually does this by counting slowly and clearly from one to the number in which the appropriate letter appears. The deaf person watches the up-swings of the meter, confirms that the letter is in this group and then repeats each one of the three letters. The hearing person says "No" or "Yes-Yes" after each letter is read to him. When the letter has been identified the deaf person writes down this letter and the same procedure continues for the next letter. Remember that some words begin with the same letters such as: go, gone, got, good, etc. If a group of letters looks like a word and the hearing person says it is not a word, then it must be part of a longer word. The deaf person should not be afraid to guess either the balance of a word, or other words in the message. If the guess is correct, the communications process will be greatly accelerated.

A. Example (Deaf Person)

1. Do you have a message for me?
   "Yes-Yes"
2. Would you like to use the "dial code"?
   "Yes-Yes"
3. Do you have a pencil and paper handy? (Wait)
   "Yes-Yes"
4. Write down your message, keeping it brief and using abbreviations.
5. How many words in your message? Please count out loud. (The hearing person may count to the number 8, which the deaf person then confirms. "There are 8 words in your message?)
6. Does your telephone dial have both letters and numbers in

each finger hole?
"Yes-Yes".

7. The letters of the alphabet are in groups of three next to each number. You are to count out loud to the number of the group that contains the first letter of your message. Be sure to include "Q" in group 7, and "Z" in group 9.
8. One, two, three, four, five.
9. The first letter is group five.
"Yes-Yes"
10. Is the first letter J? ("No") K? ("Yes-Yes")
11. Please count to the group containing the second letter.
12. One, two, three, four.
13. The second letter is in group four.
14. Is the second letter G? ("No") H? ("No") I? ("Yes-Yes")

This procedure is continued until a word is spelled. At that time, it is confirmed with the message sender. Don't be afraid to guess the remainder of the message. If you guess correctly you will speed up the communications greatly.

Alphabet Division System

One system which appears easy for a hearing person to learn on initial contact is the alphabet division system. The alphabet is divided into segments, and each segment or group of letters is numbered. You can then determine first the correct group, then the correct letter. Try the system dividing the alphabet into halves.

1	2
ABCDEFGHIJKLM	NOPQRSTUVWXYZ

If the letter to be given you is in the first half of the alphabet, try to determine if it is in the first or second quarter. If it is not in the first half, it must be in the last half, so you try to determine whether it is in the third or fourth quarter. From there, you drop down to the individual letters.

1. As the hearing person, "Is the first letter between A and M?
2. Assume the answer is "No", then you know the letter is in the last half. Then ask if the letter is between "n" to "s". If the answer is "Yes-Yes", then go through the individual letters

until you get a "Yes-Yes"answer.

You can see by this that you can locate any letter in the alphabet with just a few questions. As you become more familiar with this technique, you often can guess whole words, word endings, and locate vowels that follow consonants.

The system can be varied to divide the alphabet into quarters, or in eighths as indicated below:

	1	2	3	4
Quarters:	ABCDEF	GHIJKLM	NOPQRS	TUVWXYZ

	1	2	3	4	5	6	7	8
Eighths:	ABC	DEF	GHI	JKLM	NOP	QRS	TUV	WXYZ

Remember that regardless of the division you use, the procedure is as follows:

1. Determine how many words are in the message.
2. Determine the specific system.
3. Identify the group number which includes the letter.
4. Identify - and write - the specific letter.

Morse Code

The Speech Indicator is capable of sending messages by use of the internationally recognized Morse Code. Though the system requires code sending and receiving ability on the part of both persons, it is included here as a possible means of communication for persons willing to learn the code.

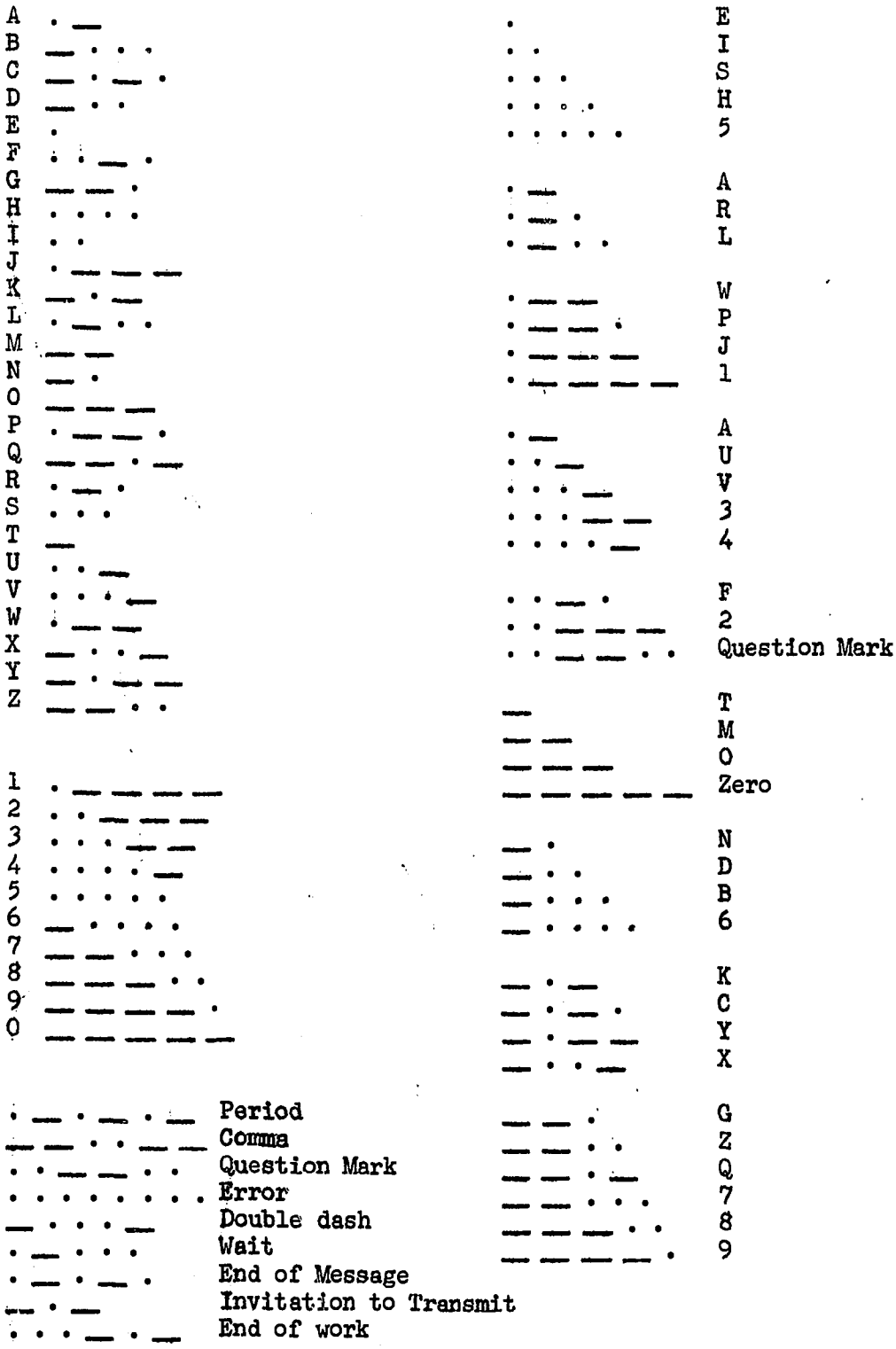
The DITS (.) and DAHHS (-) are indicated by the amount of needle deflection on the Speech Indicator. The dit (.) is shorter in duration and shows a slight needle deflection, and the dahh (-) lasts longer showing a greater needle deflection.

The receiving person should copy the dahhs (-) and dits (.) on a piece of paper as received, and then translate the code into the written message.

It is helpful if an extra long dahhh is given at the end of a word. Then the groups of letters can be easily formed into words or abbreviations.

MORSE CODE

SAY "DIT" FOR "." SAY "DAHHH" FOR "—"



This practice is followed by memorizing E I S H 5 and T M O zero. From this you learn the shorter letters, such as A, N, W, etc.

A helpful technique that will help you memorize and build up speed of recognition is to translate a written page into Morse Cole by saying the "dits" and dahhs".

The speed that can be obtained with Morse Code is dependent upon the amount of practice given. Seven words per minute can be realized if some practice is given and the code is memorized thoroughly.

Common Amateur Abbreviations

Through the years, telegraphers and radio amateurs have found a common abbreviation system to be quite useful and time-saving.

A list of some common words is included to suggest possible ways to speed your communication skill.

This code will speed up the slow process of two deaf people communicating or the hearing person sending to the deaf person.

COMMON AMATEUR ABBREVIATIONS

A B	All before	Ck	Check
Abt	About	Cum	Come
Acct	Account	Cmg	Coming
Ads	Address	Cud	Could
Agn	Again	Di Nt	Did not
Ahd	Ahead	Dnt	Don't
Ahr	Another	Dwn	Down
B	Be	Ez	Easy
B4	Before	Evy	Every
Bd	Bad	F B	Fine business, Very good
Bc	Broadcast		
Bi	By	Fr	For
Bk	Back, Break	Fm	From
Bcuz	Because	Gv	Give
Bn	Been, between	Gvg	Giving
Btr	Better	Gg	Going
Biz	Business	Gud	Good
Bt	But	G A	Good afternoon, Go ahead
Cl	Call		
Cld	Called	G B	Good-bye
Clg	Calling	G E	Good evening
Cn	Can	G M	Good morning
Cnt	Cannot	G N	Good night
Crd	Card	Gt	Got

Gess	Guess
Hi	Ha-ha, laughter
Hd	Had
Hv	Have
Hr	Hear, here
Hrd	Heard
Hm	Him
Hw	How
I C	I see
Knw	Know
Lft	Left
Ltr	Letter
Lil	Little
Lst	Listen
Mk	Make
Min	Minute
Mo	More
Mst	Most
Mi	My
Nite	Night
N G	No good
N M	No more
N	No, nothing
Nt	Not
Nil-Ntg	Nothing
N D	Nothing doing
NW	Now
Fones	Phones
Pls	Please
R	Are
Rpt	Repeat, report
Rite	Right
Sed	Said
Sa	Say
Sez	Says
C	See
C U Agn	See you again
C U L	See you later
Sm	Some
Sorri	Sorry
Tk	Take
Txt	Text
Tks-Tnx	Thanks
Tt	That
Tr	There
Tnk	Think
Ts	This
Tda	Today
Tmw	Tomorrow
Tri	Try
Vy	Very
V B	Very bad
W X	Weather
Wt	What, watt
Wo	Who
Wk	Work, weak, week
Wd-Wud	Would
U	You
U L	You will
U D	You would
Ur	Your, you're
73	Best regards
30	Finish, end
88	Love and kisses

Phonetic Code

Sometimes difficulty is encountered in understanding unusual words or sounds. Also, some letters can be easily misunderstood, for example, "B" and "V".

The International Civil Aviation Organization has developed an internationally recognized phonetic code to assist in sending messages without confusion. You would clarify the letters in question by following them with a word, for clarification. An example would be "Bat", relayed as "B-Bravo", "A-Alpha", "T-Tango".

The I.C.A.O. code is as follows:

A - Alfa	J - Juliett	S - Sierra
B - Bravo	K - Kilo	T - Tango
C - Charlie	L - Lima	U - Uniform
D - Delta	M - Mike	V - Victor
E - Echo	N - November	W - Whiskey
F - Foxtrot	O - Oscar	X - X-Ray
G - Golf	P - Papa	Y - Yankee
H - Hotel	Q - Quebec	Z - Zulu
I - India	R - Romec	

Examples of Speech Indicator Applications

Barbara Babbini, a deaf person at San Fernando Valley State College, has prepared several specific examples of communications she has had occasion to complete using the Speech Indicator.

Possibly the procedures involved in these examples will suggest ways you can improve your telephone communication with the hearing world.

EXAMPLE 1: Dental Appointment

Phone call placed to dentist. (Dentist is out. Answering service takes the call.)

Caller: I am a deaf person, but I am using what is called a Speech Indicator. It tells me when you are speaking, but not what you say. However, we can have a one-way conversation if you will follow a simple code for yes and no answers. Please say "Yes" twice - like this: "Yes-Yes" when you want me to get "Yes". This will register on the dial as two sounds. When you want to say "No", just say "No" once. This will register once. If you do not understand me, say "Please Re-peat", which has three syllables and will register three times. Now, do you understand me?

Response: "Yes-Yes"

Caller: Fine, now, is this Dr. Heller's office?

Response: Bouncy, bouncy, bouncy, bouncy goes the needle.

Caller: I'm sorry, but I didn't catch that. Remember, "Yes-Yes" and "No". Do you have that?

Response: "Yes-Yes"

Caller: Do I have (give phone number)?

Response: "Yes-Yes"

Caller: Dr. Heller's office?

Response: ---------- "Yes-Yes"

Caller: Is this Dr. Heller?

Response: "No"

Caller: Is Dr. Heller in his office?

Response: "No"

Caller: Will he be in later?

Response: "No"

Caller: Is this the answering service?

Response: "Yes-Yes"

Caller: Thank you. I'll call again tomorrow. This is Mrs. Babbini calling. I wanted to make an appointment. Did you catch name?

Response: "No"

Caller: Mrs. B A B B I N I. Now did you catch that?

Response: "Yes-Yes"

Caller: Thank you, and goodbye.

Response: One bounce.

EXAMPLE 2 - Beauty Shop Appointment

Phone call placed to beauty shop to change time of appointment with operator, Fran, from 11:00 a.m. to another time, and to ask if Fran has enough time to give caller a dye job.

Caller: Morrie Gordon's beauty salon?

Response: One bounce of needle, indicating "Yes". If it were not, there would be a lot of bounces indicating someone talking, explaining or something.

Caller: This is Barbara Babbini. I'm deaf, as you probably know, being a steady customer of Morrie's shop. I have a special device------etc. Do you understand me?

Response: "Yes-Yes"

Caller: Fine. Now, I have an appointment with Fran for 11:00 tomorrow. Is Fran too busy to come to the phone right now?

Response: "No"

(Delay while Fran is called.)

Response: Bouncy, bounce.

Caller: Is this Fran?

Response: One bounce.

Caller: Fran, this is Barbara Babbini. I don't know if whoever answered the phone explained to you about the gismo I'm using. It is --------etc. Do you understand me?

Response: "Yes-Yes"

Caller: Fran, I can't make that 11:00 appointment tomorrow morning. Have another engagement. Do you have any other openings tomorrow afternoon? I need a dye job, too.

Response: (Delay while Fran Checks appointment book.) "Yes-Yes"

Caller: Can you take me later?

Response: "Yes-Yes"

Caller: Okay, that's fine. What time? Now, don't get all shook up. We can get the time straight easily. If, for instance, you want to take me at 2:45, count into the phone like so--one, two. I'll count the number of times the needle bounces on the dial. Then I'll ask you "Two o'clock?" You answer "No". I'll ask "Three"? and you answer "No". "2:45"? Then you answer "Yes". Understand?

Response: "Yes-Yes"

Caller: Okay, then what time can you take me?

Response: One, two, three.

Caller: Three o'clock?

Response: "No"

Caller: Three-fifteen?

Response: "Yes-Yes"

Caller: Fine, Three-fifteen tomorrow. How do you like this gismo?

Response: "Yes-Yes ----- "Yes-Yes"

Caller and Response: Bye bye -- bye bye.

EXAMPLE 3 - Ironing Woman

Phone call placed to ironing woman to see if ironing is ready to be picked up.

Caller: This is Barbara Babbini, your deaf customer. I'm using a special device that ----------ect.

Do you understand me?

Response: "Please Re-peat"

Caller: (Repeats spiel a bit slower and clearer.)

Response: "Yes-Yes"

Caller: I'm calling to see if the ironing is ready to be picked up.

Response: "Yes-Yes"

Caller: Will you be home all evening?

Response: --------"No"

Caller: You won't be home all evening?

Response: "No"

Caller: Will you be home for awhile this evening?

Response: "Yes-Yes"

Caller: Can I drop in during the time when you will be home?

Response: "Yes-Yes"

Caller: What time shall I come over? (Here, caller explains the method of conveying time.)

Response: 1, 2, 3, 4, 5, 6, 7.

Caller: Seven o'clock?

Response: "No"

Caller: Seven-fifteen?

Response: "Yes-Yes"

Caller: Okay. 7:15, and I'll bring 22 hangers with me. Okay?

Response: "Yes-Yes"

Caller and response: Exchange bye-byes

EXAMPLE 4 - Pay Phone Usage

A deaf person wants to call home from an airport. Airport is outside of his home's toll-free zone. Problem is how to find out how much to deposit in the pay phone and WHEN to deposit the money.

(Caller lifts receiver, waits for dial tone - getting none, realizes he

must deposit dime. Does so. Gets dial tone. Dials operator.)

Caller: I am a deaf person, placing this call from a pay phone. The number of this phone is _____. I am using a special device to help me on the phone. This device tells me when you are speaking, but not - what - you - are - saying (emphasis on that last). By using a very simple code, though, you can tell me what I want to know. If the answer is yes, please say "Yes" twice - like this: "Yes-Yes". If the answer is no, please say "No" once. If you do not understand me, please say "Please Re-peat". Did you understand what I said?

Response: "Yes-Yes"

Caller: That is good. Now I have a slight problem. I wish to call 343-3117, which is outside of this toll-free zone, and don't know how much I will have to deposit. I also do not know when I will have to deposit the money. So, you will have to tell me how much and when to deposit the money. Do you understand me so far?

Response: "Yes-Yes"

Caller: Fine. Now, I am going to say some amounts of money, in units of 5 cents. When I say the correct amount, please blow into the phone loudly, or say "Stop" loudly. I will then know that is the correct amount. Do you follow me?

Response: "Yes-Yes"

Caller: Okay, then. 15 cents? 20 cents? 25 cents? 30 cents? 35 cents?

Response: Stop!

Caller: I read 35 cents. Is that the correct amount?

Response: "Yes-Yes"

Caller: Fine. (Puts 35 cents on shelf under phone.) Now, I have the change ready. Will you connect me with 343-3117, and when I am supposed to deposit the money, say "Yes-Yes-Yes" I will then deposit the money required. Is that clear?

Response: "No"

Caller: What didn't you catch? The number, or the last of what I said? The number?

Response: "Yes-Yes"

Caller: The number is 343-3117. Did you catch it this time?

Response: "Yes-Yes"

Caller: Is everything else clear?

Response: "Yes-Yes"

Caller: Fine. Now, remember, when I am to deposit the money, say yes three times.

Response: ------(delay) "Yes-Yes-Yes"

Caller: (Deposits 35¢) I have now deposited 35 cents. When my party is on the line, please blow into the phone four times, or say "No-No-No-No" four times, loudly and distinctly. If there is no answer, say "Nooooooooooooo". If the line is busy, let the busy signal come through to my telephone. I will then know the line is busy and try again later. Is all of this clear?

Response: "Yes-Yes"

Caller: Fine, carry on. I'll be waiting.

Response: (Delay while connection is made.) The needle bounces 4 times.

Caller: Thank you, operator. Hello, this is Alan. I'm using a special device that Babs Babbini has lent me. It tells me when you are speaking --------(etc.) Now, who is on the phone, Cindy?

Response: "Yes-Yes"

Caller: (----goes on with message to tell mother he'll be home a little late, as he decided to go to the airport with friends to see Babs off, and so on.)

* * * * * *

At the completion of Section IV, you should have the knowledge necessary to participate in two-way communications using various kinds of telephone equipment. Possession of this knowledge, however, does not insure smooth communication. This is a skill which will come only after systematic practice and application of your knowledge in a variety of situations.

SECTION V

SPEECH INDICATOR - CARE AND MAINTENANCE

The Speech Indicator is a relatively simple electronic device designed to give many years of trouble-free service. Each Speech Indicator is protected under a warranty which you should read and save for future reference. To validate the warranty you must fill out and return the postcard which is enclosed with each Speech Indicator.

Care of the Speech Indicator

The following list of "do's" and "don'ts" is presented for your information:

DO plan to use the Speech Indicator regularly.

DO handle the Speech Indicator with care.

DO test the plug-ins, position on the phone, and on-off/volume switch before taking the device apart for maintenance.

DO turn the unit off when not in use. Otherwise, the power will be drained from the battery.

DON'T drop the Speech Indicator.

DON'T twist or yank the cord. The wires may break and cause faulty responses.

DON'T subject the Speech Indicator to extreme heat or cold.

DON'T let confusion or problems during some calls discourage you. Think positive and be persistent.

Maintenance

The Speech Indicator is powered by a standard 9 volt battery, the same kind used in small transistor radios. Batteries will supply power for adequate operation of the Speech Indicator for about one full year.

When the meter deflection is noticeably weak, even with the volume turned to high, this could be a sign of weak batteries. Also, if the meter shows full deflection before connecting it to a telephone, there is a possibility of a faulty battery. Remove the two screws on the end of

the Speech Indicator case, replace the battery, and check for normal operation.

Occasionally, a wire is pulled loose in the magnetic pick-up or the connecting plug. If the cord has been damaged or pulled loose, a new magnetic pick-up can be purchased at most radio or electronic repair stores or from the Leadership Training Program at San Fernando Valley State College.

Return for Repair

If the Speech Indicator is damaged, or the normal repairs fail to correct a problem, return the Speech Indicator to:

Leadership Training Program in the Area of the Deaf
San Fernando Valley State College
18111 Nordhoff Street
Northridge, California 91324

The damaged or faulty unit will be repaired or replaced, and returned to you in working condition.

APPENDIX

LESSON PLAN - 1st Session - 3 Hours

Page

A. Installation of the Speech Indicator (See diagram) 4

1. Standard installation
2. Checking for optimum signal response
3. Alternate installation procedures

B. Speech Indicator Operation 3

Students should observe - and itentify - the following signals:

1. The dial tone
2. Ring signal
3. Busy signal
4. Responses:
   a. "No"
   b. "Yes-Yes"
   c. "Please Re-peat"
   d. "Hold it-Hold it-Hold it-Hold it"
5. Sound on the telephone
   a. Party line
   b. Room noise and sounds
   c. Voice signals
   d. Noise on the phone line
   e. Breathing into the phone
   f. Hitting the phone accidentally

C. Standard Introduction 6

The standard introduction in Section II, page 6, is commonly used as a pattern for telephone usage practice.

1. Deaf students should complete calls across the room to their training partner until they develop the security and ability to satisfy the training partner and instructor.
2. Place the first outside call. Discuss the outside call with your training partner.

D. Suggestions

1. Organization of your messages so they can be answered with a "No" or "Yes-Yes" response. (Page 7)

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2. Conversation blocks
3. Phrasing of short sentences

E. Individual Practice Suggestions 7

1. Plan and complete several calls
2. Use worksheets provided

LESSON PLAN - Second Session - 3 Hours

A. Report (by deaf student) on completion of individual practice sessions

B. View film - "Speech Indicator"

C. Basic Principles

1. Sound
2. Telephone communication

D. Proper Telephone Operation

1. Correct dialing
2. Courtesy - How long to ring, etc.
3. Answering a telephone

E. Special Telephone Systems 9

1. Pay telephones
2. PBX switchboards
3. Long distance calls
   a. Direct distance dialing
   b. Person-to-person
4. Telephone services
   a. Operator "O"
   b. Emergency situations
5. Special telephone equipment
   a. Recorded messages
   b. Key phones
   c. Intercept operator
6. Hotel and motel telephone systems

Page

F. Individual Practice Suggestions

1. Complete calls comparable to those presented on the worksheets.

2. Keep a log of the calls and your evaluation of the success of each call.

LESSON PLAN - Third Session - 3 Hours

A. Report (by deaf student) on completion of individual practice sessions.

B. Special Systems for Communication 14

1. Number systems
2. "Dial code" system
3. Alphabet division system
4. Morse code
5. Common abbreviations
6. Phonetic code

C. Speech Indicator Care and Maintenance 28

D. Review of Basic Procedure

1. Student demonstrations
2. Discuss variations to the basic procedures

E. Evaluation of Student Performance

INDIVIDUAL PRACTICE WORKSHEET

A. Standard Introduction

1. My name is Mary Smith .
2. I am a deaf person and cannot hear what you say.
3. I have a device that will indicate to me when you say "No", "Yes-Yes" or "Please Re-peat".
4. I will ask you questions, and would like you to respond with "No", "Yes-Yes" or "Please Re-peat".
5. Do you understand?
6. Is this (Number you are trying to reach) ?
7. Is this (Person you are trying to reach) ?

---

8. Do you have time to talk?
9. Are you eating?
10. Have you ever seen one of our Speech Indicators?
11. How is the weather? Is it warm?
12. Is it raining?
13. It was nice talking to you. Thank you. Good bye.

INDIVIDUAL PRACTICE WORKSHEET

A. Standard Introduction

1. My name is (Mary Smith) .
2. I am a deaf person and cannot hear what you say.
3. I have a device that will indicate to me when you say "No", "Yes-Yes" or "Please Re-peat".
4. I will ask you questions, and would like you to respond with "No", "Yes-Yes" or "Please Re-peat".
5. Do you understand?
6. Is this (Number you are trying to reach) ?
7. Is this (Person you are trying to reach) ?

---

8. Do you have the television on?
9. Were you watching a play?
10. Are you watching Channel 2?
11. Channel 4?
12. Channel 5?
    a. Continue until you know which channel
13. It has been nice talking to you. Thank you. Good night.

PBX WORK SHEET

(Deaf Person)

1. You are calling Dr. Jones at San Fernando State College. You want to ask him if he can change the meeting time from 1:30 to 4:30 on next Tuesday.
   You are to dial your helper. The helper will play the role of the operator, secretary, and Dr. Jones.

2. You are calling Dr. Jones to determine if your Speech Indicator has been repaired, and if you should return the loan unit.
   Dial a helper, and he will play the roles involved in the conversation.

3. You are phoning Miss Virginia Vail, Reseda Adult School, to find if a class in current events can be offered next spring for a group of your friends.
   Dial a helper who will role-play the other persons involved.

4. You are phoning Reseda Adult School, and you would like to talk to a counselor to make an appointment to learn the procedure necessary to earn a high school diploma.
   Dial a helper who will role-play the other persons involved.

PBX WORK SHEET

Suggestions for Training Partner

. . . You will have to play the operator, secretary, and executive of a company.

. . . The operator always answers with the Company name.

a. (Example) San Fernando State College

. . . The trainee should give you information in regard to the extension or the name of the person he would like to talk to. Please have the trainee repeat the information, as many operators will have them do.

. . . The secretary will answer by saying, "Leadership Training". Try to make the situation realistic by having the trainee wait, or by sometimes having him leave a message.

. . . You may change the situation by having Dr. Jones answer when the operator rings. Give enough variety so that the trainee will have experience with all types of situations.

EMERGENCY CALLS WORKSHEET

Very few people can go to the phone in the time of emergency and give all the information that is necessary. The Emergency Call Work Sheet is designed to make the student think the situation through and analyze the information at hand and give it to the other helper in correct form with confirmation on the important points.

A. Car Trouble

1. My child is at the theater, and she expects me to pick her up.
2. My car won't start.
3. Could you pick up the child?
4. She is at _____Theater.
5. She will be ready at _____ o'clock.

B. Flat Tire

1. I have a flat tire.
2. I am at the corner of 1st Street and "A" Street in (City).
3. My car is a 1963 Chevrolet.
4. Would you please send someone to fix it?

C. Power Failure

1. I have no electricity in my home.
2. I have checked the circuit breakers and they are turned on.
3. Could you send a man to check the power coming to my home?
4. My name is _____.
5. My address is _____.
6. My city is _____.
7. My phone is _____.

HOMEWORK ASSIGNMENT

Use your Speech Indicator to telephone your friends.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

1. Did you remember to say "goodbye" or "It has been nice talking to you"?
2. Were you able to place any calls using Direct Distance Dialing?
3. How many calls did you place through an operator? What problems did you encounter?
4. Were you able to identify when someone else was using your party line?
5. What can be done to encourage deaf people to use the Speech Indicator?
6. What communication code or system do you like best?
7. What systems need to be developed?
8. What calls did you make that were interesting, unusual, or solved a problem for you?